

CLAIMS

What is claimed as being new and desired to be protected by LETTERS PATENT of the United States is as follows:

1. a pressurized, plate-heated die system for allowing a user to dispense a liquid in a safe and efficient manner, comprising in combination:

a mounting plate having a rectilinear configuration, the mounting plate having a plurality of bolt holes there through, the mounting plate also having a plurality of die mounting holes there through;

a distribution plate having a generally rectilinear configuration and being oriented perpendicular to the mounting plate, the distribution plate having an outside and an inside and a thickness with edge there between, the edge of the distribution plate having a material feed aperture and a material feed tube coupled there to for the receipt of liquid polymer, the distribution plate having a plurality of bolt holes there through for coupling of the distribution plate;

a U-shaped shim having a plurality of bolt holes there through, the shim being coupled to the distribution plate, the shim having the opening of the U being an extrusion opening and located in a downwardly direction a heater plate;

a first insulator dielectric plate having a generally rectilinear configuration and having a plurality of bolt holes

there through, the dielectric plate having an aperture for the receipt of a temperature sensor there in;

a heating element having a generally rectilinear configuration, the heating element having an electrical connector for receiving power;

a second insulator dielectric plate having a generally rectilinear configuration and having a plurality of bolt holes there through;

an end plate having a generally rectilinear configuration with an inside and an outside and an edge there between, the inside of the plate having a plurality of threaded bolt holes for receiving bolts, the inside of the end plate also having a plurality of locator pins, with the end plate having bolt holes on the upper edge to align with the bolt holes of the mounting plate;

a plurality of spacers associated with the mounting plate and the end plate; and

a plurality of bolts to couple the components of the die.

2. a pressurized, plate-heated die system, comprising in combination:

a distribution plate having a material feed aperture and a material feed tube coupled there to;

a U-shaped shim;

a first insulator dielectric plate having a temperature sensor there in;

a heating element;

a second insulator dielectric plate;

an end plate; and

a plurality of bolts to couple the components of the die.

3. A pressurized, plate-heated die system as set forth in Claim 2 wherein the heating element comprises an electric heating element and the system further comprises a power source to provide current to the heating element.

4. A pressurized, plate-heated die system as set forth in Claim 2 wherein the heating element comprises a liquid heating element and the system further includes a source of a heated liquid.

5. A method to construct a pressurized, plate-heated die system for allowing a user to dispense a liquid in a safe and efficient manner, comprising the following steps in combination:

providing a mounting plate having a rectilinear configuration, the mounting plate having a plurality of bolt holes there through, the mounting plate also having a plurality of die mounting holes there through;

providing a distribution plate having a generally rectilinear configuration and being oriented perpendicular to the mounting plate, the distribution plate having an outside and an

inside and a thickness with edge there between, the edge of the distribution plate having a material feed aperture and a material feed tube coupled there to for the receipt of liquid polymer, the distribution plate having a plurality of bolt holes there through for coupling of the distribution plate whereby the distribution plate forms one end of the die system;

providing a U-shaped shim having a plurality of bolt holes there through, the shim being coupled to the distribution plate, the shim having the opening of the U being an extrusion opening and located in a downwardly direction a heater plate therefore allowing material within the confines of the shim to be moved in a downwardly direction;

providing a first insulator dielectric plate having a generally rectilinear configuration and having a plurality of bolt holes there through, the dielectric plate having an aperture for the receipt of a temperature sensor there in with the first insulator being operatively coupled to the shim;

providing a heating element having a generally rectilinear configuration thereby allowing for an even heat across the surface of the heating element, the heating element having an electrical connector for receiving power with the heating element being operatively coupled to the first insulator thereby allowing transfer of heat from the heating element through the insulator while monitoring the temperature of the first insulator plate;

providing a second insulator dielectric plate having a generally rectilinear configuration and having a plurality of bolt holes there through with the second insulator plate being operative coupled to the heating element;

providing an end plate having a generally rectilinear configuration with an inside and an outside and an edge there between, the inside of the plate having a plurality of threaded bolt holes for receiving bolts, the inside of the end plate also having a plurality of locator pins, with the end plate having bolt holes on the upper edge to align with the bolt holes of the mounting plate;

providing a plurality of spacers associated with the mounting plate and the end plate; and

coupling the components of the die by a plurality of bolts whereby the components may be easily disassembled and cleaned and assembled.